

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To: JEFFREY G. SHELDON
SHELDON & MAK, INC.
225 SOUTH LAKE AVENUE
9TH FLOOR
PASADENA, CA 91101-3021

PCT

WRITTEN OPINION

(PCT Rule 66)

Date of Mailing
(day/month/year)

13 MAY 1998

Applicant's or agent's file reference

10455-1PCT

REPLY DUE

within TWO months
from the above date of mailing

International application No.

PCT/US96/11300

International filing date (day/month/year)

03 JULY 1996

Priority date (day/month/year)

NONE

International Patent Classification (IPC) or both national classification and IPC
Please See Supplemental Sheet.

Applicant

CERA, INC.

1. This written opinion is the first (first, etc.) drawn by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step or industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

When? See the time limit indicated above. ~~The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).~~

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also For an additional opportunity to submit amendments, see Rule 66.4.
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 *bis*.
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 03 NOVEMBER 1998

Name and mailing address of the IPEA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

Facsimile No. (703) 305-3230 3102

Authorized officer

SUN UK KIM

Telephone No. (703) 308-2350

WRITTEN OPINION

International application No.

PCT/US96/11300

I. Basis of the opinion

1. This opinion has been drawn on the basis of *(Substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed".)*:

☒ the international application as originally filed.

☒ the description, pages 1-10 , as originally filed.

pages NONE , filed with the demand.

pages NONE , filed with the letter of _____

☒ the claims, Nos. 1-26 , as originally filed.

Nos. NONE , as amended under Article 19.

Nos. NONE , filed with the demand.

Nos. NONE , filed with the letter of _____

☒ the drawings, sheets/fig 1-2 , as originally filed.

sheets/fig NONE , filed with the demand.

sheets/fig NONE , filed with the letter of _____

2. The amendments have resulted in the cancellation of:

☒ the description, pages NONE

☒ the claims, Nos. NONE

☒ the drawings, sheets/fig NONE

3. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the ~~Supplemental Box~~ Additional observations below (Rule 70.2(c)).

4. Additional observations, if necessary:

NONE

WRITTEN OPINION

International application No.

PCT/US96/11300

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. STATEMENT**

Novelty (N)	Claims <u>1-25</u>	YES
	Claims <u>26</u>	NO
Inventive Step (IS)	Claims <u>6-8, 12-20, 22-24</u>	YES
	Claims <u>1-5, 9-11, 21, 25, 26</u>	NO
Industrial Applicability (IA)	Claims <u>1-26</u>	YES
	Claims <u>NONE</u>	NO

2. CITATIONS AND EXPLANATIONS

Claims 1-5, 9-11, 21 and 25 lack an inventive step under PCT Article 33(3) as being obvious over Mehl in view of Markell et al. Mehl teaches method of using a filter for separating fluid samples comprising a microcolumn (12), a thin extraction media disc of particles (42) made of silica which are retained by upper and lower compression layers (44) made of glass fibers which inherently have a pore size less than the particle of the extraction media to retain particles (see figures 4-7; col. 2, lines 1-16; col. 3, lines 37-47; col. 4, line 61 - col. 5, line 55). Mehl also teaches that thickness of disc is 0.4 mm and diameter of disc is 4 mm and such specification of disc meets the claimed ratio of the effective diameter of the extraction media layer to the thickness of the layer (see col. 3, lines 37-47; col. 4, lines 61-64). Claims 1-5, 9-11, 21 and 25 essentially differ from the method and apparatus of Mehl in reciting that the extraction media has a particle size of less than 20 microns. Markell et al teach an extraction media disk comprising particles having a size less than 20 microns (see col. 8, line 27 - col. 10, line 11). Incorporating particles having a size less than 20 microns in the extraction media of Mehl would have been obvious since such particles are known to be used for extraction process as taught in Markell et al.

Claim 26 lack novelty under PCT Article 33(2) as being anticipated by Pieper et al. Pieper et al teach a container (20, 22) having a thin layer of microparticulate extraction media (40) (see col. 4, line 7 - col. 6, line 19).

Claims 6-8, 12-20 and 22-24 meet the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest the apparatus for extracting a substance from a liquid sample including upper mesh flow distributor of claims 6-7 and the lower mesh flow distributor of claim 8, the combination of the upper mesh flow distributor and the lower mesh flow distributor of claims 12, 16 and 17. Claims 13-15 and 22 depend on the novel and non-obvious claim 12. Claim 23 depends on the novel and non-obvious claim 16. Claims 18-20 and 24 depend on the novel and non-obvious claim 17. (Continued on Supplemental Sheet.)

WRITTEN OPINION

International application No.

PCT/US96/11300

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claims 1, 7, 12, 18 and 20 are objected to under PCT Rule 66.2(a)(v) as lacking clarity under PCT Article 6 because the claims 1, 7, 12, 18 and 20 are indefinite for the following reason(s): Recitations of "the lower surface" in claims 1 and 12 and "the upper mesh flow distributor" in claim 7 lack positive antecedent basis. Claims 18 and 20 depending on the independent claim 17 appear to redundantly claim an upper mesh flow distributor and a lower mesh flow distributor which are already recited in the independent claim 17.

WRITTEN OPINION

International application No.

PCT/US96/11300

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 10

TIME LIMIT:

The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report.

CLASSIFICATION:

The International Patent Classification (IPC) and/or the National classification are as listed below:
IPC(6): B01D 24/00, 24/12, 24/22, 25/00, 29/085, 29/39, 37/00, 39/02 and US Cl.: 210/198.2, 263, 283, 287, 289, 290, 291, 435, 446, 456, 483, 484, 488, 489, 490, 491, 502.1, 503, 505; 422/58, 59, 60, 69, 70, 101, 102, 104; 436/177, 178, 527; 530/412, 413, 416, 417; 502/401, 405

V. 2. REASONED STATEMENTS - CITATIONS AND EXPLANATIONS (Continued):

Claims 1-26 meet industrial applicability as defined by PCT Article 33(4) because the claimed subject matter can be made and/or used in industry.

____ NEW CITATIONS _____
NONE